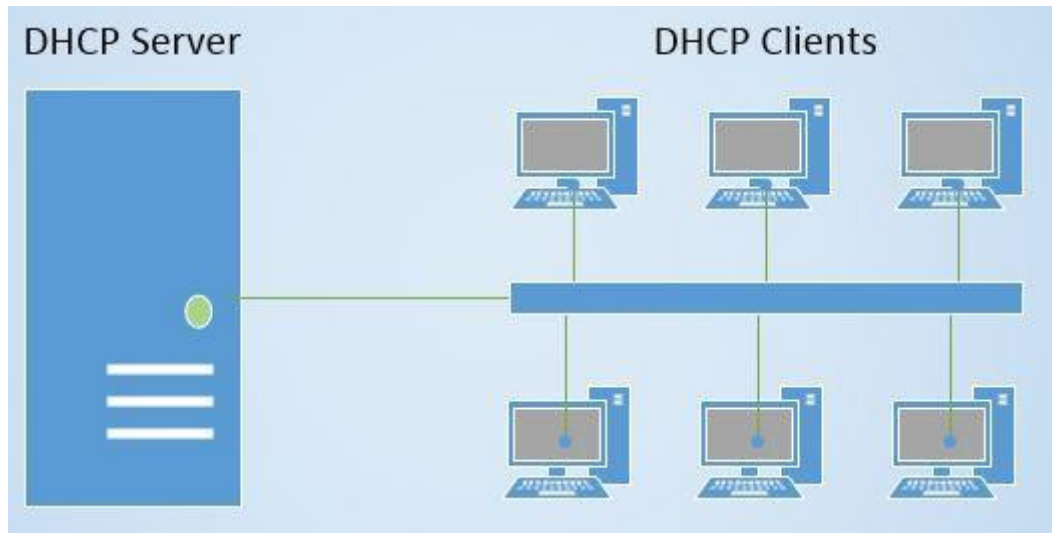


7. Cấu hình dịch vụ DHCP Trên Windows Server 2012

DHCP là viết tắt của Dynamic Host Configuration Protocol, là một giao thức cấp địa chỉ IP một cách tự động. DHCP Server là một máy chủ chạy dịch vụ DHCP mà tại đó tiếp nhận các yêu cầu và cấp IP cho các client.

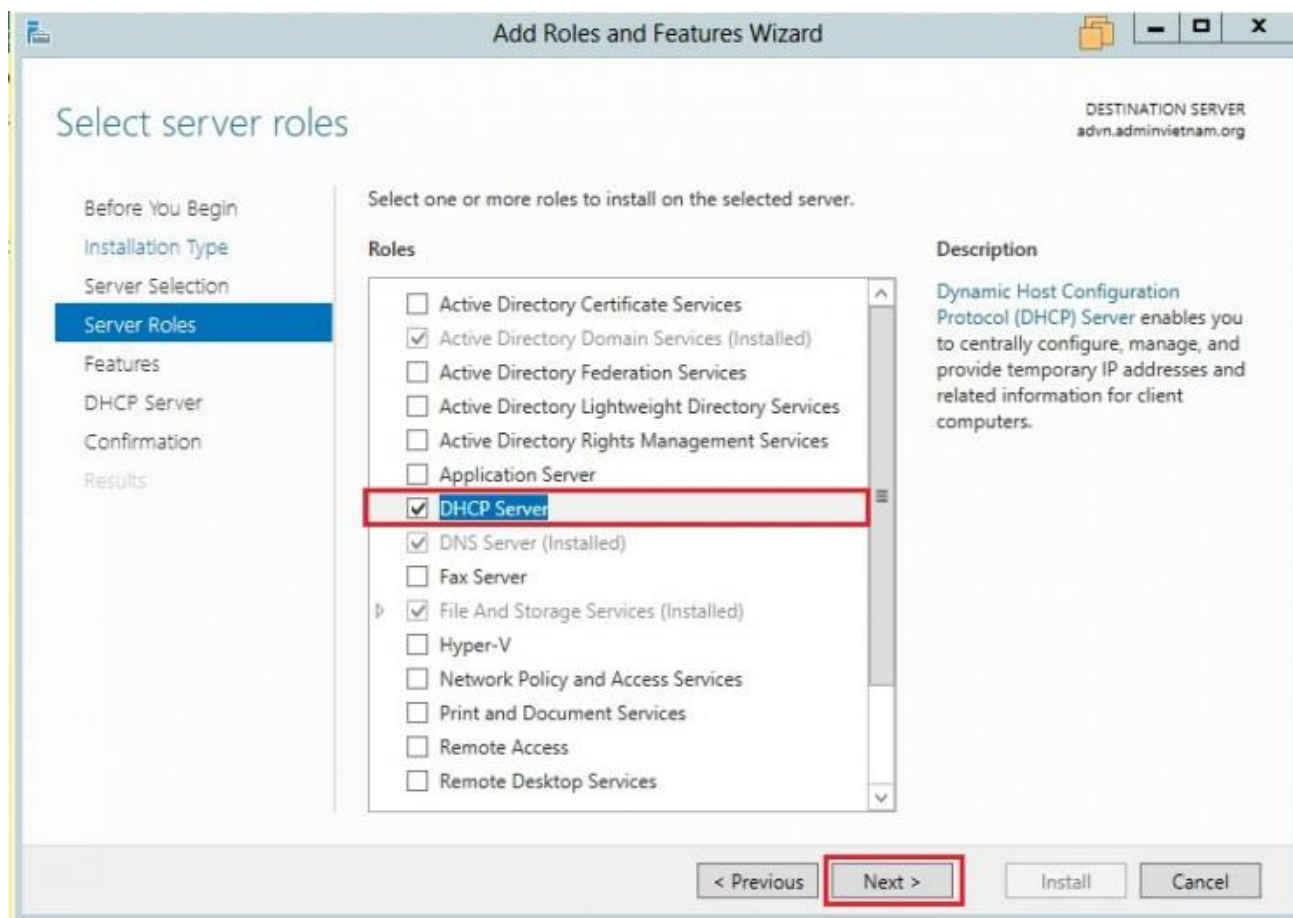


Để cấu hình DHCP cần:

- 1 máy windows server 2012 đã nâng cấp DC.
- 1 máy windows 8 làm client.

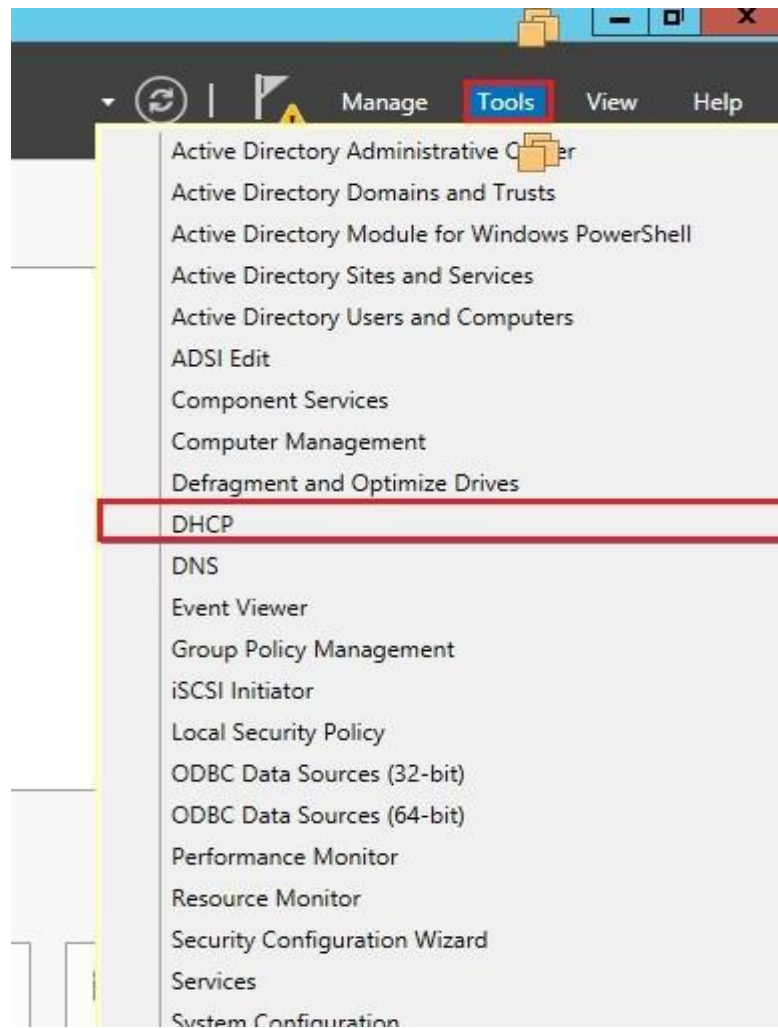
THỰC HIỆN:

Trên máy DC, ta truy cập Server Manager > Add Roles and Feature để cài đặt dịch vụ DHCP Server.

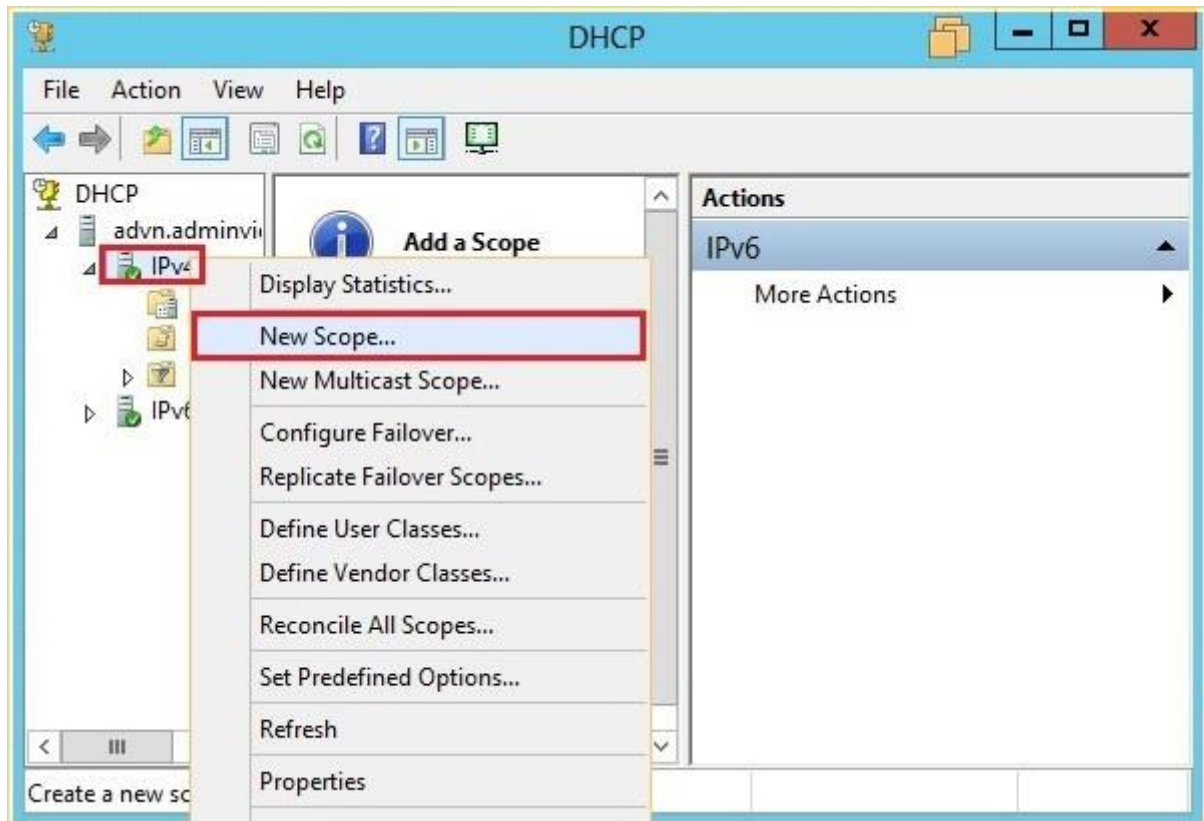


Sau đó ấn **Next** và **Install** để cài đặt => **Close**

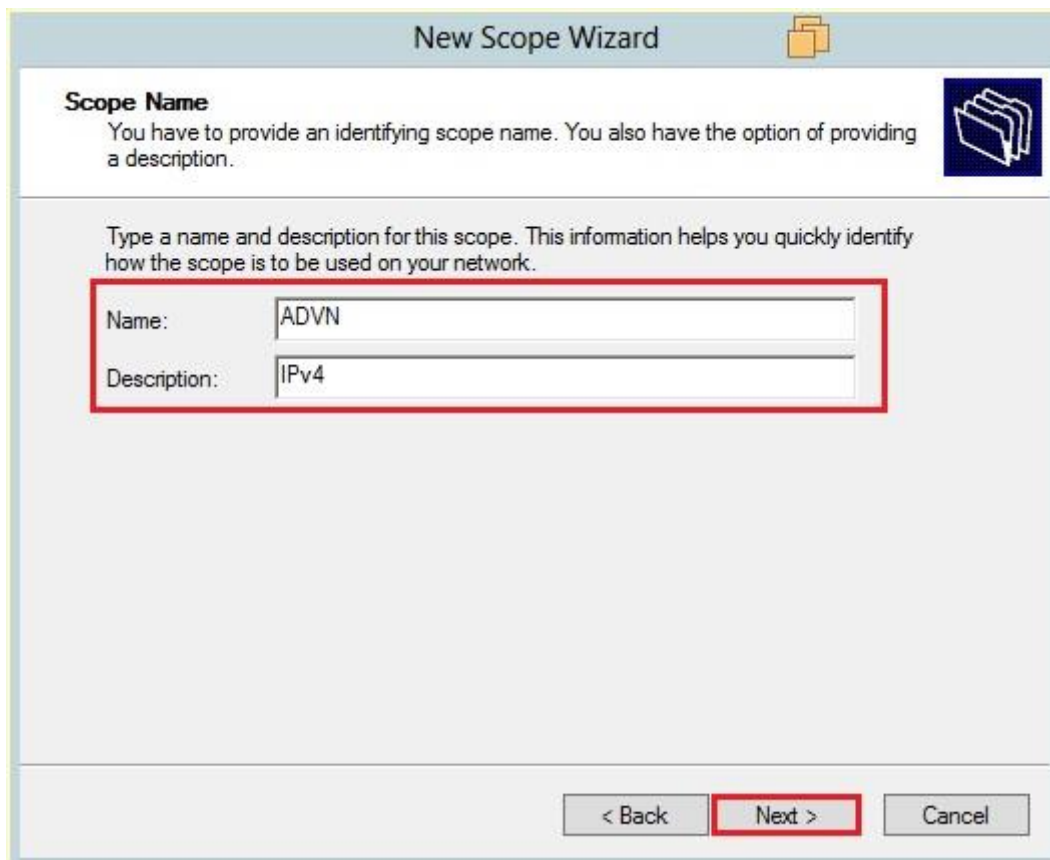
Tiếp theo click vào **Tools** chọn **DHCP**.



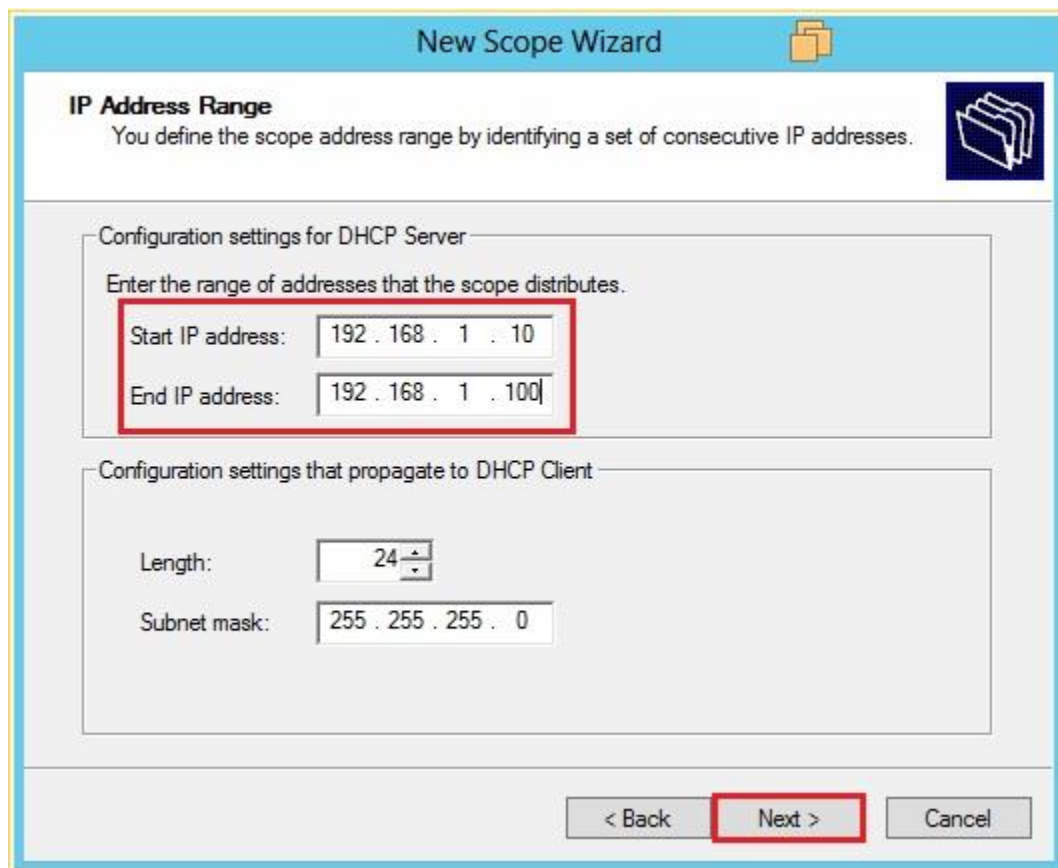
Tiếp đến Click phải vào **IPv4** và chọn **New Scope...**



Click Next và bắt đầu cấu hình.



Đến bước này thực hiện điền dãy địa chỉ IP. Start IP: là dãy IP đầu tiên được cấp phát. End IP: là dãy IP cuối cùng được cấp phát..



Ta có thể cắt bỏ 1 dải IP thuộc dải mà chúng ta vừa khai báo cấp phát bên trên, làm như thế thì dải địa chỉ gõ vào đây sẽ không được cấp phát cho bất kỳ máy nào trong mạng khi client xin IP.

New Scope Wizard

Add Exclusions and Delay

Exclusions are addresses or a range of addresses that are not distributed by the server. A delay is the time duration by which the server will delay the transmission of a DHCP OFFER message.

Type the IP address range that you want to exclude. If you want to exclude a single address, type an address in Start IP address only.

Start IP address: End IP address:

Excluded address range:

Subnet delay in milli second:

Click Next và sau đó cài đặt thời gian của IP, hết thời gian này Client sẽ được cấp IP mới. Sau đó Click Next.

New Scope Wizard

Lease Duration

The lease duration specifies how long a client can use an IP address from this scope.

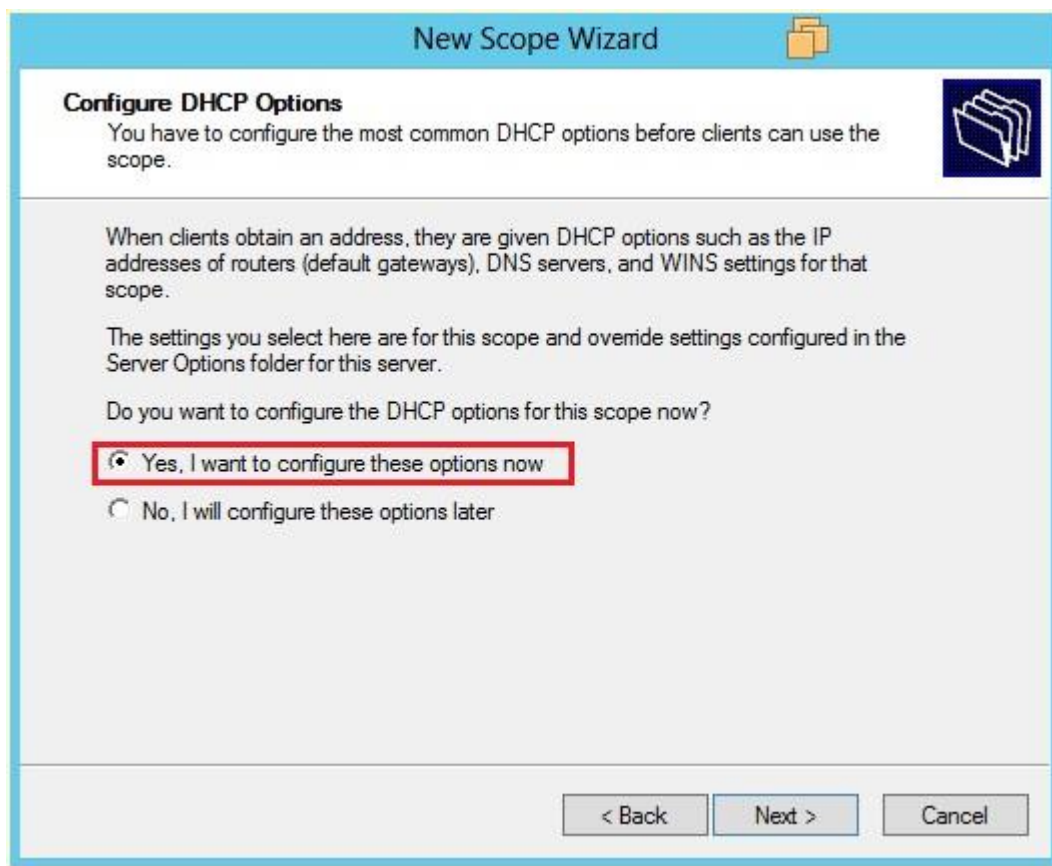
Lease durations should typically be equal to the average time the computer is connected to the same physical network. For mobile networks that consist mainly of portable computers or dial-up clients, shorter lease durations can be useful. Likewise, for a stable network that consists mainly of desktop computers at fixed locations, longer lease durations are more appropriate.

Set the duration for scope leases when distributed by this server.

Limited to:

Days: Hours: Minutes:

Click Next sau đó chọn vào ô **Yes, I want to configure these options now** để cấu hình **scope** vừa thực hiện.



The image shows a screenshot of the 'New Scope Wizard' window, specifically the 'Configure DHCP Options' step. The window has a blue title bar with the text 'New Scope Wizard' and a folder icon. Below the title bar, the section is titled 'Configure DHCP Options' with a sub-header 'You have to configure the most common DHCP options before clients can use the scope.' and a folder icon. The main content area contains the following text: 'When clients obtain an address, they are given DHCP options such as the IP addresses of routers (default gateways), DNS servers, and WINS settings for that scope.' followed by 'The settings you select here are for this scope and override settings configured in the Server Options folder for this server.' and the question 'Do you want to configure the DHCP options for this scope now?'. There are two radio button options: 'Yes, I want to configure these options now' (which is selected and highlighted with a red rectangle) and 'No, I will configure these options later'. At the bottom right, there are three buttons: '< Back', 'Next >', and 'Cancel'.

New Scope Wizard

Configure DHCP Options
You have to configure the most common DHCP options before clients can use the scope.

When clients obtain an address, they are given DHCP options such as the IP addresses of routers (default gateways), DNS servers, and WINS settings for that scope.

The settings you select here are for this scope and override settings configured in the Server Options folder for this server.

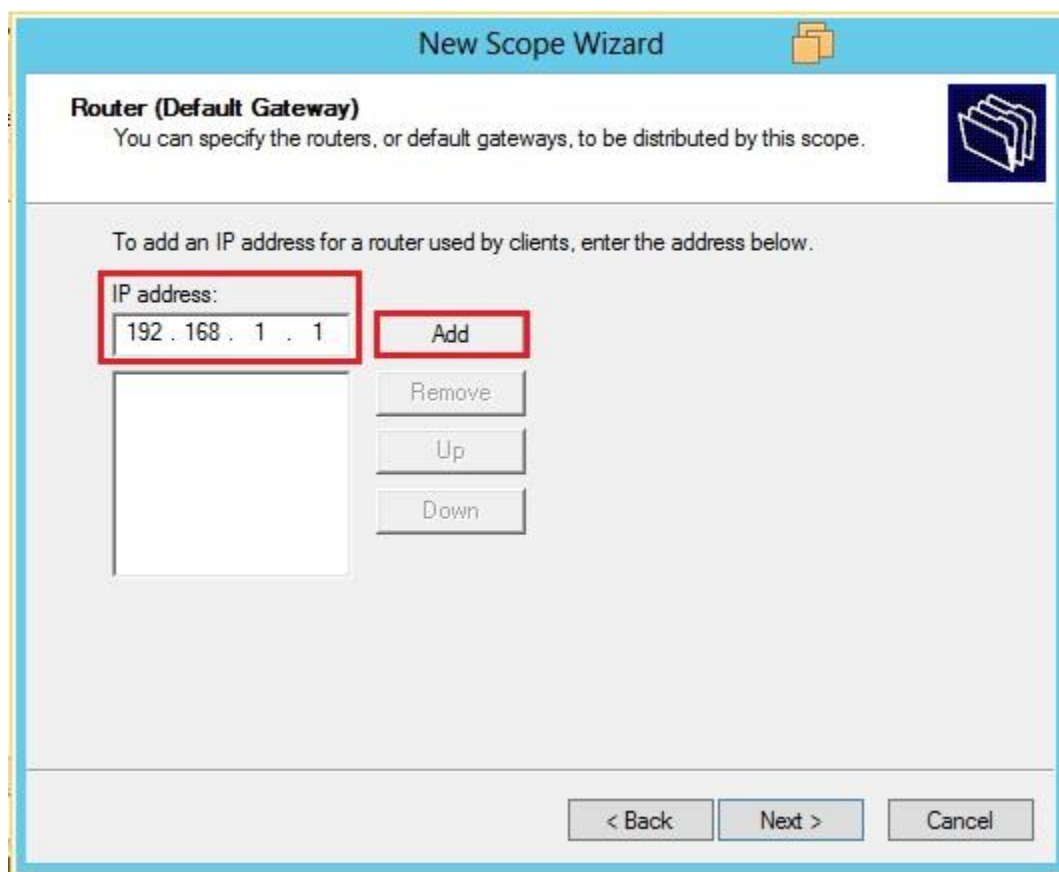
Do you want to configure the DHCP options for this scope now?

☒ Yes, I want to configure these options now

☐ No, I will configure these options later

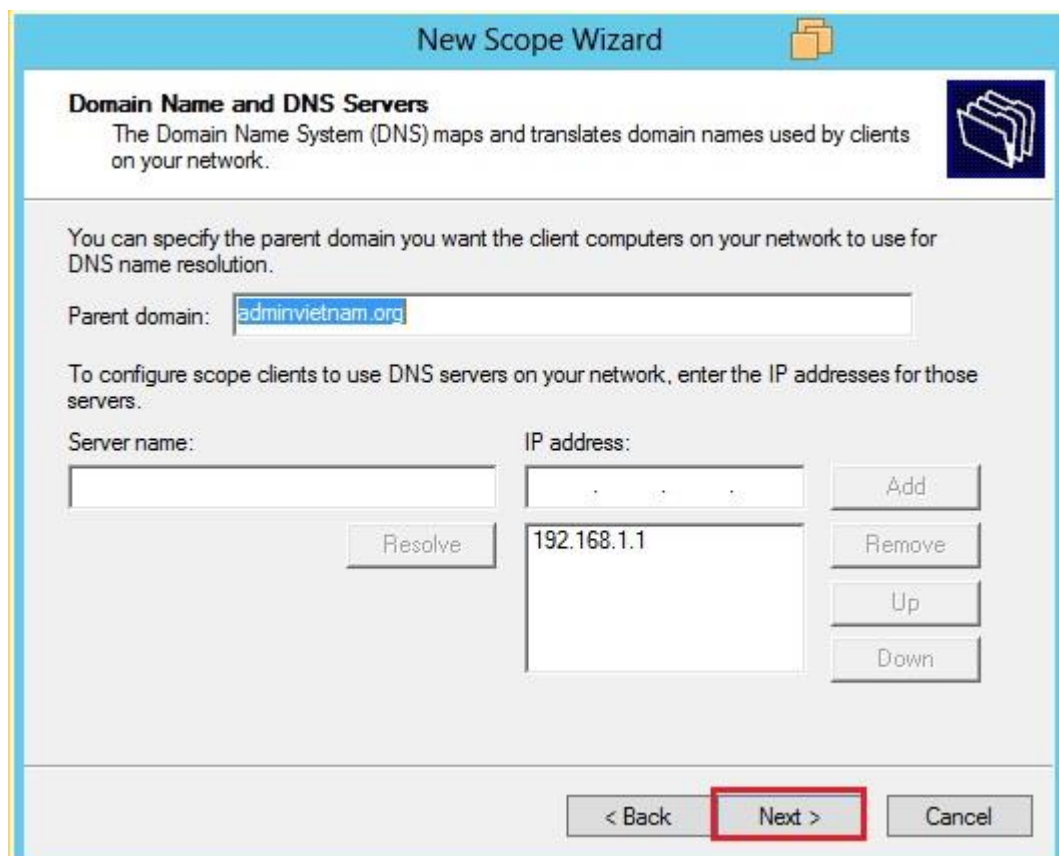
< Back Next > Cancel

Nhập vào **Default Gateway**. sau đó Click vào Add và Click Next



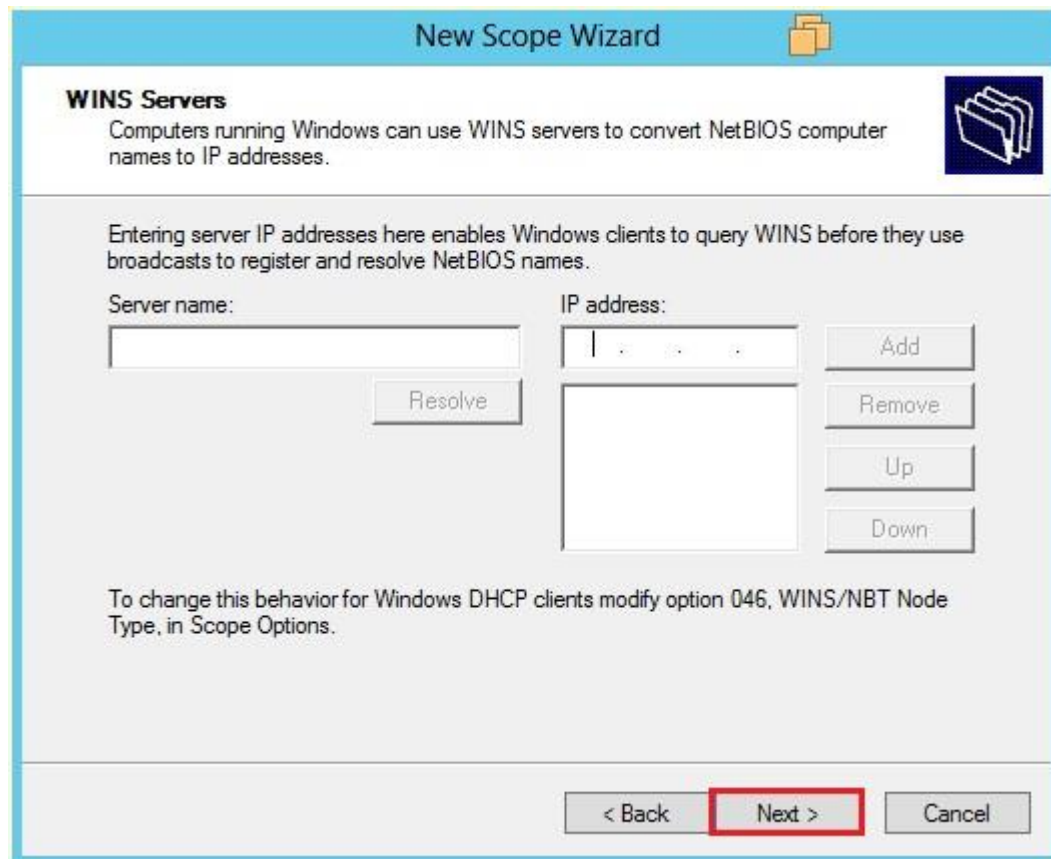
The screenshot shows the 'New Scope Wizard' window, specifically the 'Router (Default Gateway)' step. The title bar says 'New Scope Wizard'. Below the title, it says 'Router (Default Gateway)' and 'You can specify the routers, or default gateways, to be distributed by this scope.' There is a folder icon on the right. The main area says 'To add an IP address for a router used by clients, enter the address below.' There is a text box labeled 'IP address:' containing '192 . 168 . 1 . 1'. To the right of this text box is an 'Add' button. Below the text box is a list box. To the right of the list box are three buttons: 'Remove', 'Up', and 'Down'. At the bottom right are three buttons: '< Back', 'Next >', and 'Cancel'. The 'Add' button and the 'Next >' button are highlighted with red rectangles.

Bước này ta Click Next



The screenshot shows the 'New Scope Wizard' window, specifically the 'Domain Name and DNS Servers' step. The title bar says 'New Scope Wizard'. Below the title, it says 'Domain Name and DNS Servers' and 'The Domain Name System (DNS) maps and translates domain names used by clients on your network.' There is a folder icon on the right. The main area says 'You can specify the parent domain you want the client computers on your network to use for DNS name resolution.' There is a text box labeled 'Parent domain:' containing 'adminvietnam.org'. Below this, it says 'To configure scope clients to use DNS servers on your network, enter the IP addresses for those servers.' There are two text boxes: 'Server name:' and 'IP address:'. The 'IP address:' box contains '192.168.1.1'. To the right of the 'IP address:' box are three buttons: 'Add', 'Remove', and 'Up'. Below these are two buttons: 'Down' and 'Resolve'. At the bottom right are three buttons: '< Back', 'Next >', and 'Cancel'. The 'Next >' button is highlighted with a red rectangle.

Ở đây ta bỏ qua WINS server => Click Next



The screenshot shows the 'New Scope Wizard' window, specifically the 'WINS Servers' step. The title bar says 'New Scope Wizard'. The main heading is 'WINS Servers' with a subtext: 'Computers running Windows can use WINS servers to convert NetBIOS computer names to IP addresses.' Below this, a paragraph explains: 'Entering server IP addresses here enables Windows clients to query WINS before they use broadcasts to register and resolve NetBIOS names.' There are two input fields: 'Server name:' and 'IP address:'. The 'IP address:' field has a dropdown menu showing '1', '2', '3', and '4'. To the right of the 'IP address:' field are four buttons: 'Add', 'Remove', 'Up', and 'Down'. Below the 'Server name:' field is a 'Resolve' button. At the bottom of the window, there are three buttons: '< Back', 'Next >', and 'Cancel'. The 'Next >' button is highlighted with a red rectangle.

New Scope Wizard

WINS Servers
Computers running Windows can use WINS servers to convert NetBIOS computer names to IP addresses.

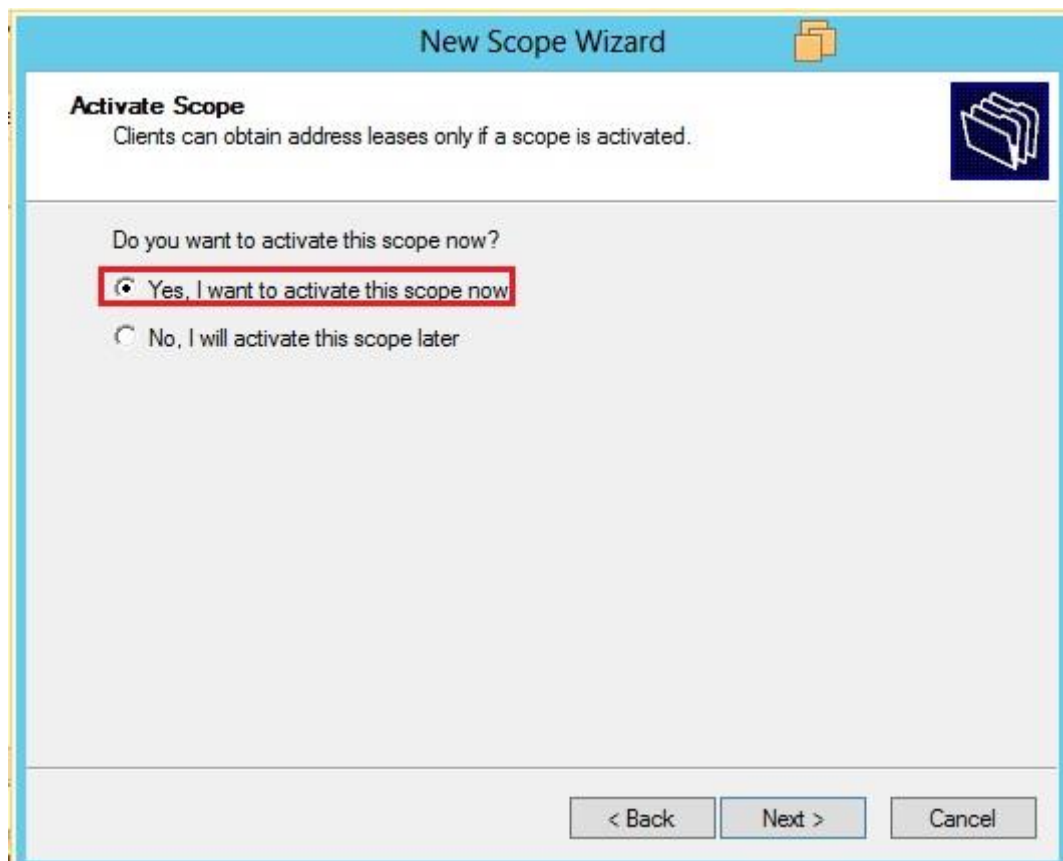
Entering server IP addresses here enables Windows clients to query WINS before they use broadcasts to register and resolve NetBIOS names.

Server name:

IP address:

To change this behavior for Windows DHCP clients modify option 046, WINS/NBT Node Type, in Scope Options.

Chọn Yes, I want to activate this scope now.



The screenshot shows the 'New Scope Wizard' window, specifically the 'Activate Scope' step. The title bar says 'New Scope Wizard'. The main heading is 'Activate Scope' with a subtext: 'Clients can obtain address leases only if a scope is activated.' Below this, a question is asked: 'Do you want to activate this scope now?'. There are two radio button options: 'Yes, I want to activate this scope now' and 'No, I will activate this scope later'. The first option is selected and highlighted with a red rectangle. At the bottom of the window, there are three buttons: '< Back', 'Next >', and 'Cancel'.

New Scope Wizard

Activate Scope
Clients can obtain address leases only if a scope is activated.

Do you want to activate this scope now?

☒ Yes, I want to activate this scope now

☐ No, I will activate this scope later

Sau đó chọn **Finish** để kết thúc.

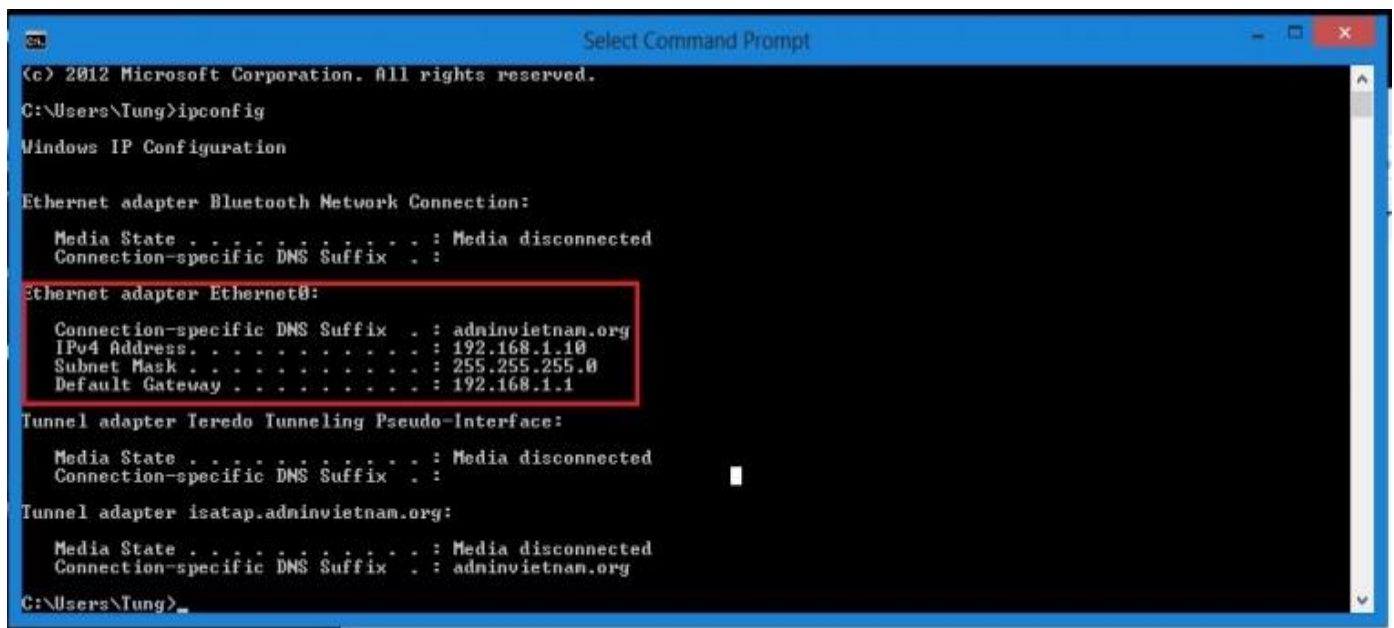


Đến đây đã thực hiện cấu hình xong DHCP server, bây giờ khởi động máy Windows 8 lên để test.

Chú ý: máy Windows 8 không cần thiết phải join vào domain nhưng phải nằm cùng một đường mạng với máy DHCP server.

Thực Hiện Trên Windows 8:

Mở máy Windows 8 cho phép máy nhận IP động và chúng ta có được kết quả như sau:



```
(c) 2012 Microsoft Corporation. All rights reserved.
C:\Users\Tung>ipconfig

Windows IP Configuration

Ethernet adapter Bluetooth Network Connection:

    Media State . . . . . : Media disconnected
    Connection-specific DNS Suffix  . :
Ethernet adapter Ethernet0:
    Connection-specific DNS Suffix  . : adminvietnam.org
    IPv4 Address. . . . . : 192.168.1.10
    Subnet Mask . . . . . : 255.255.255.0
    Default Gateway . . . . . : 192.168.1.1
Tunnel adapter Teredo Tunneling Pseudo-Interface:
    Media State . . . . . : Media disconnected
    Connection-specific DNS Suffix  . :
Tunnel adapter isatap.adminvietnam.org:
    Media State . . . . . : Media disconnected
    Connection-specific DNS Suffix  . : adminvietnam.org
C:\Users\Tung>
```

9. Cấu hình Domain Controller và DNS Server trên Windows Server 2012

Domain Controller là gì ?

Một trong những khái niệm quan trọng nhất của mạng Windows là domain (tức miền hay vùng). Một domain là tập hợp các tài khoản người dùng và tài khoản máy tính được nhóm lại với nhau để quản lý một cách tập trung. Và công việc quản lý là dành cho domain controller (bộ điều khiển miền) nhằm giúp việc khai thác tài nguyên trở nên dễ dàng hơn.

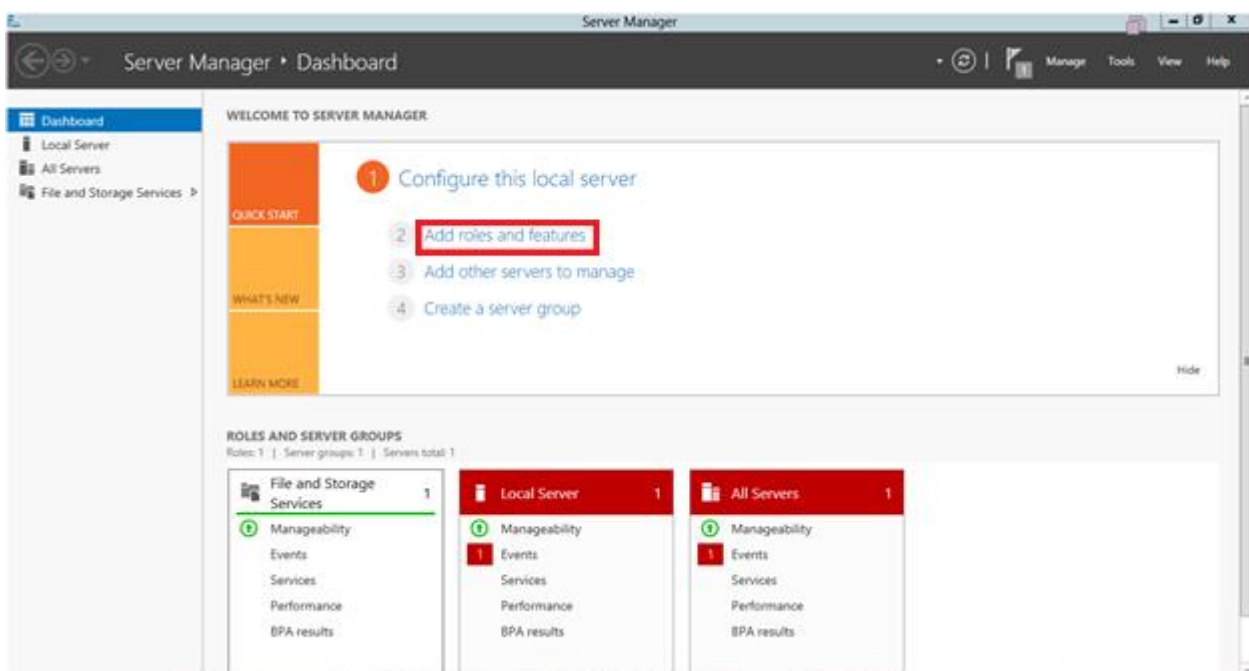
Bài lab này sẽ cấu hình DC (Domain Controller) và DNS server (dịch vụ phân giải tên miền) trên nền tảng Windows server 2012.

chuẩn bị:

- máy Windows server 2012
- máy Windows 8 (dùng để test join Domain)

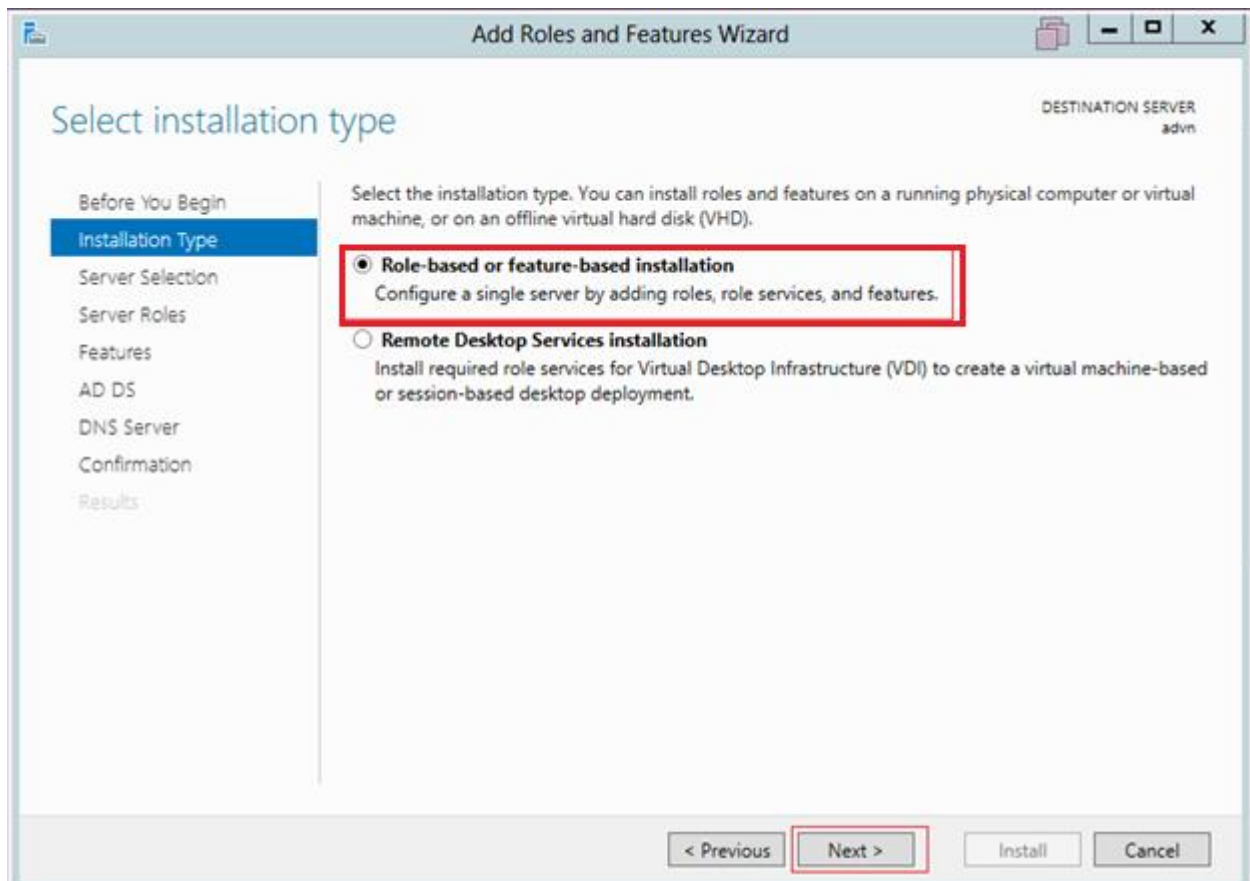
Thực Hiện:

Mở **Server Manager** và click vào **Add roles and features**



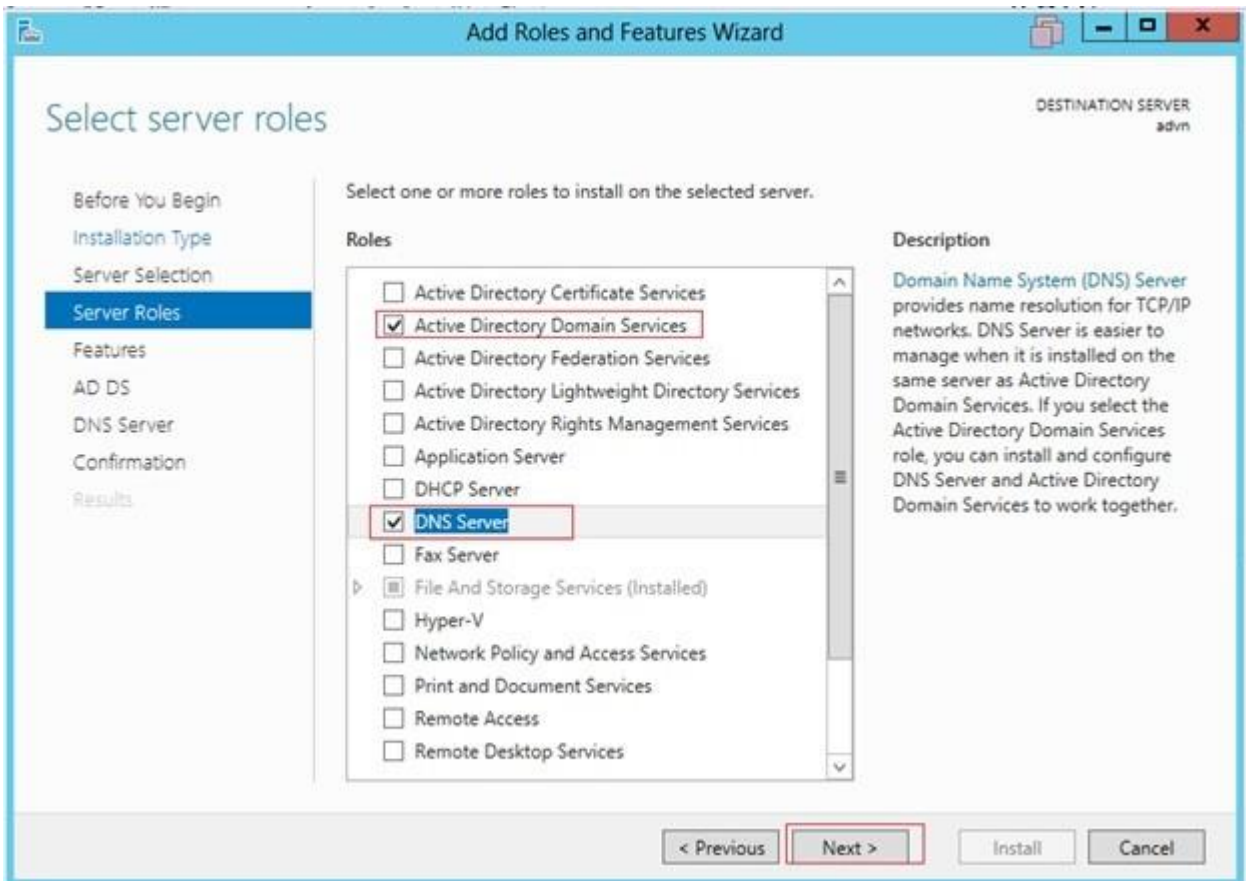
click Next

Chọn **Role-based or featured-based installation** và click **Next**.



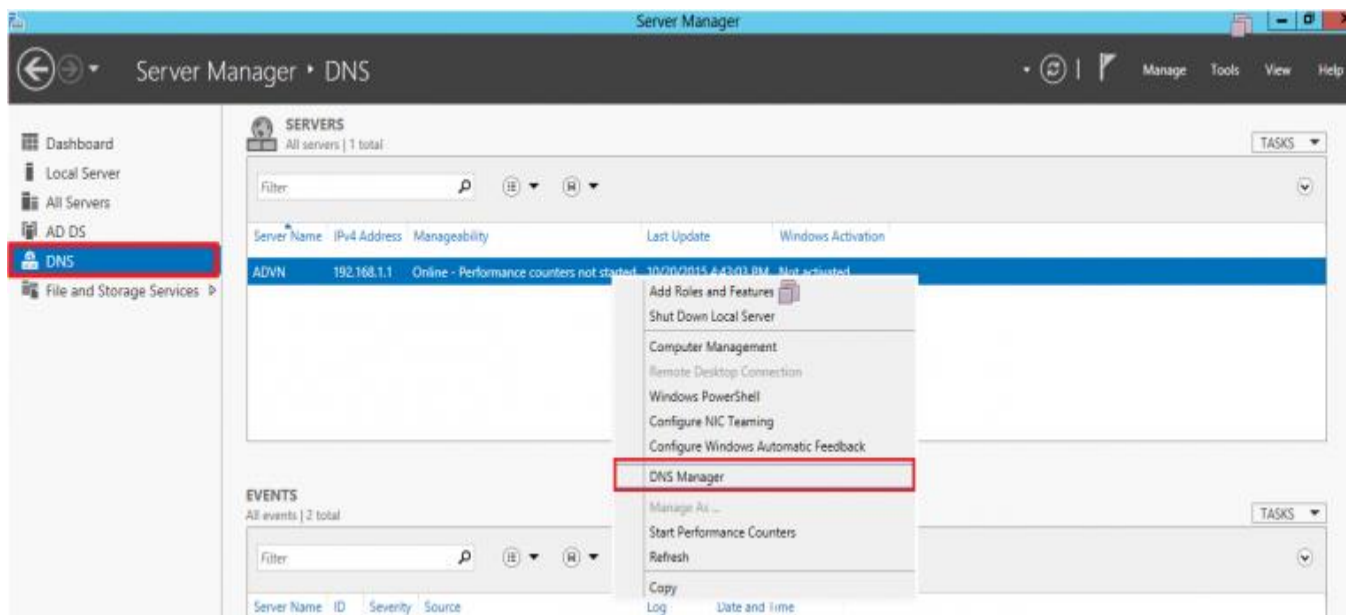
Tại server selection click Next.

Chọn **Active Directory Services** và **DNS server** => **add Features** => **Next**.

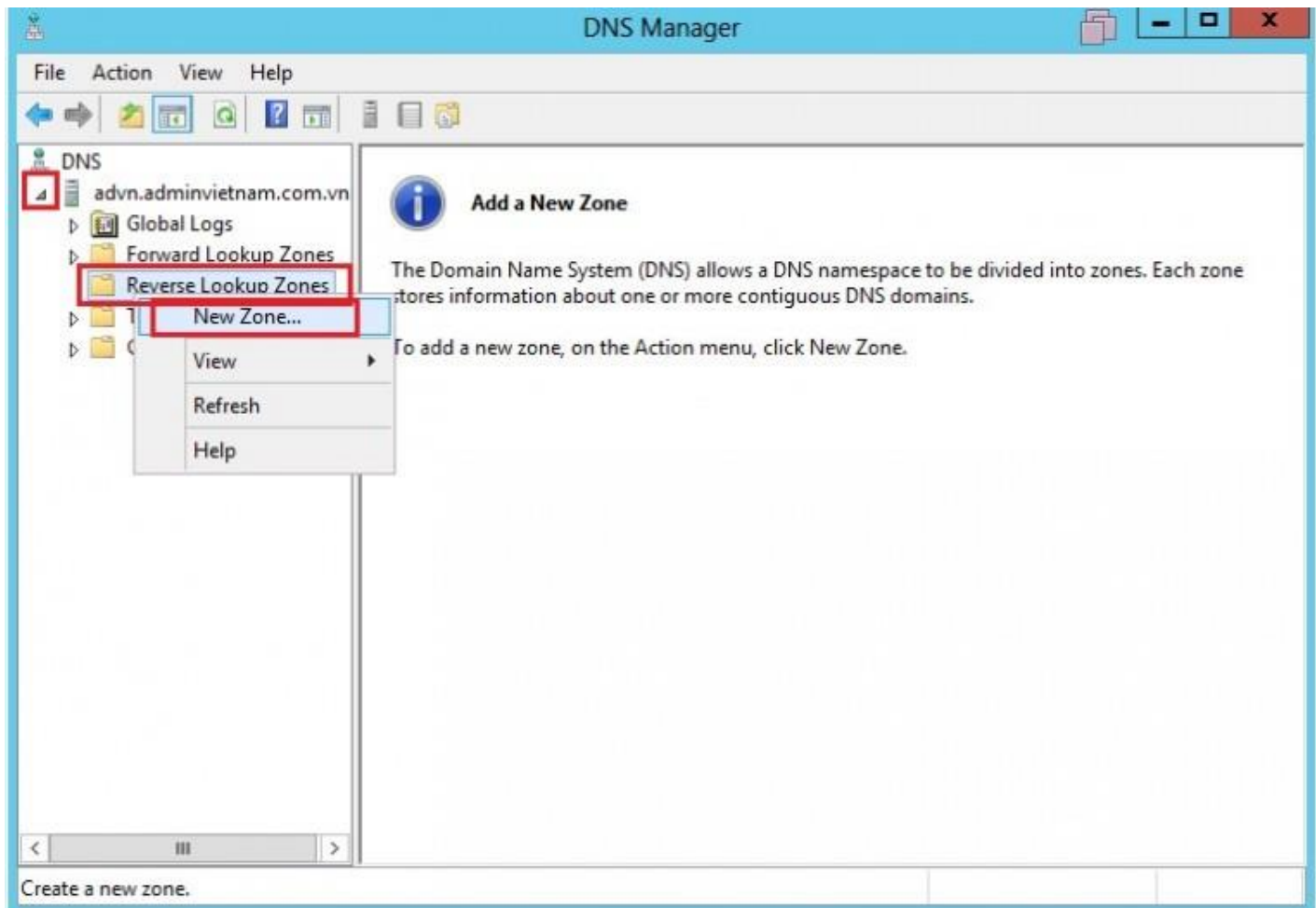


Cấu Hình DNS

Để cấu hình DNS mở **server manager** chọn vào DNS click chuột phải chọn **DNS manager**



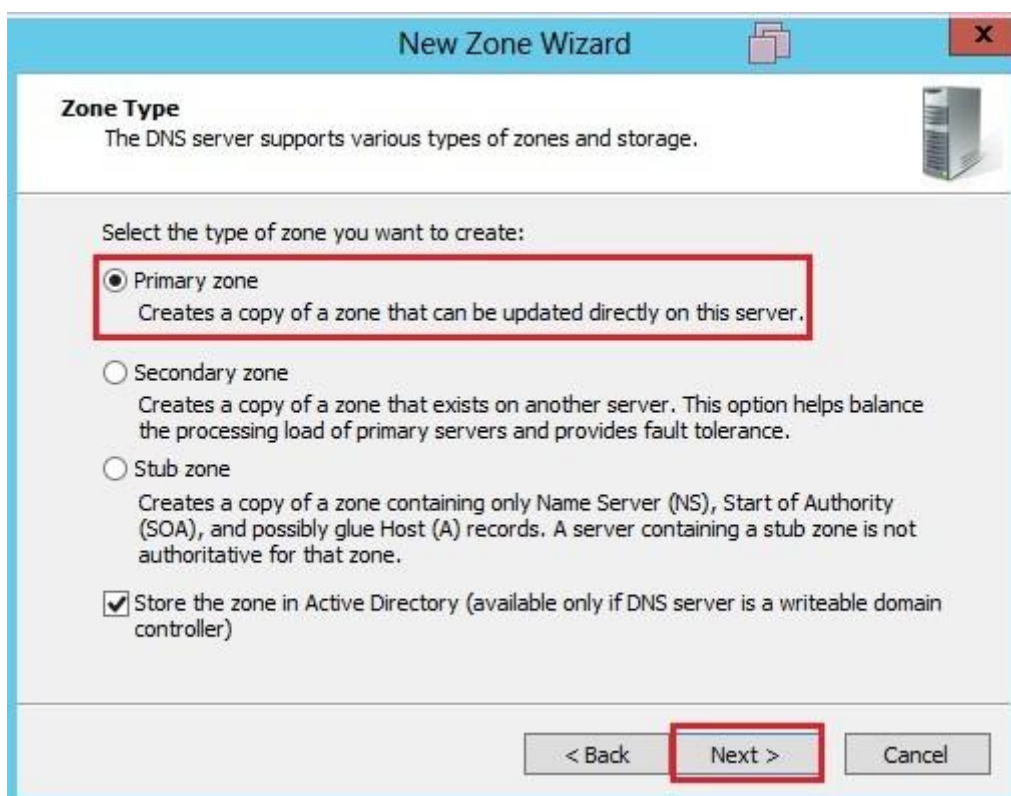
Click vào nút mở rộng chọn **Reverse Lookup Zone** => chọn **New Zone**



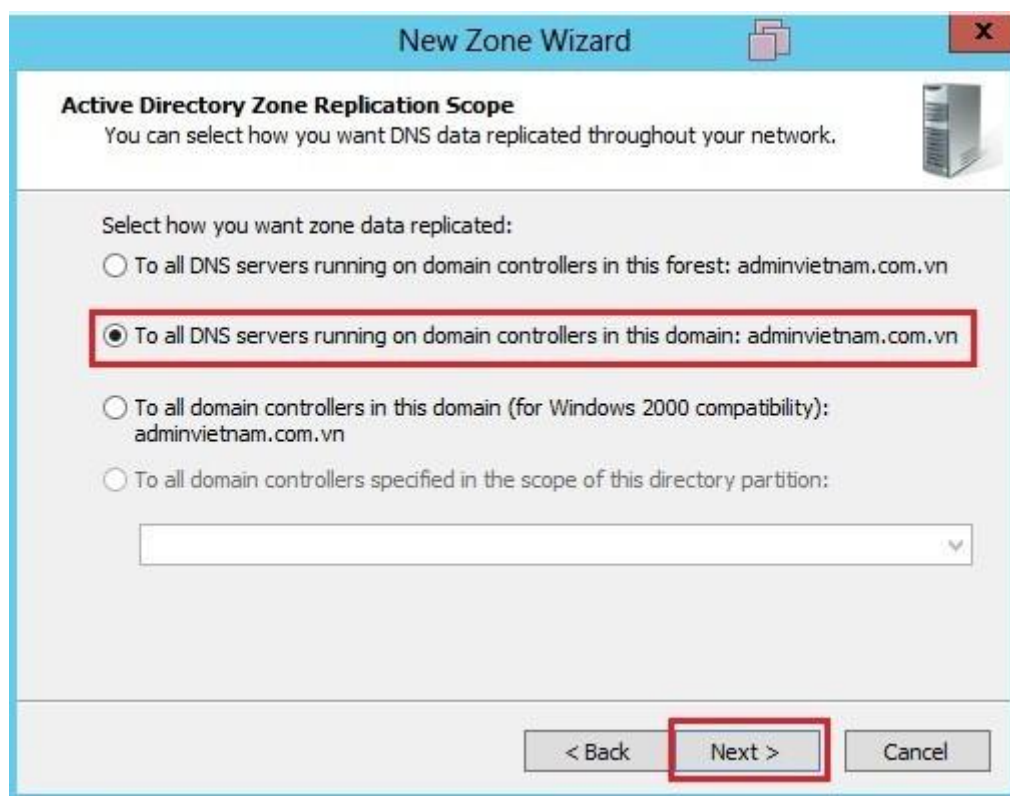
click Next



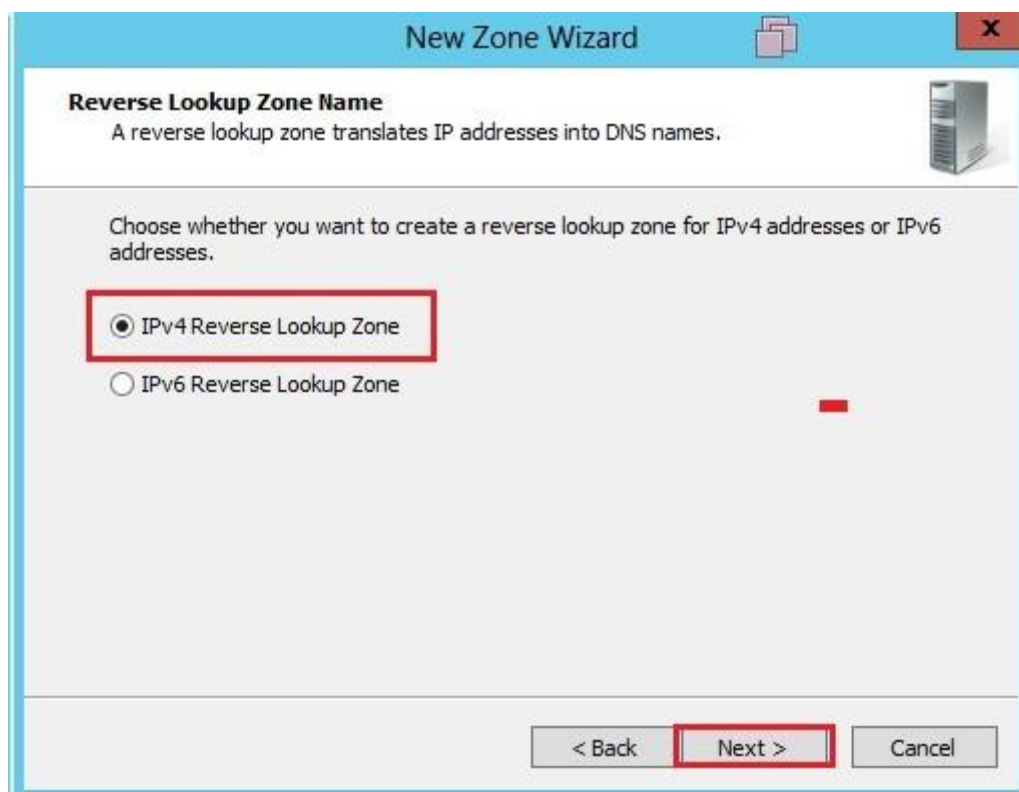
Chọn Primary zone => click next.



Chọn **to all DNS servers running on domain controllers in this domain:**
mangmaytinhh.com => click Next.



Chọn **Ipv4 Reverse Lookup Zone** click Next



Nhập địa chỉ đường mạng click Next.

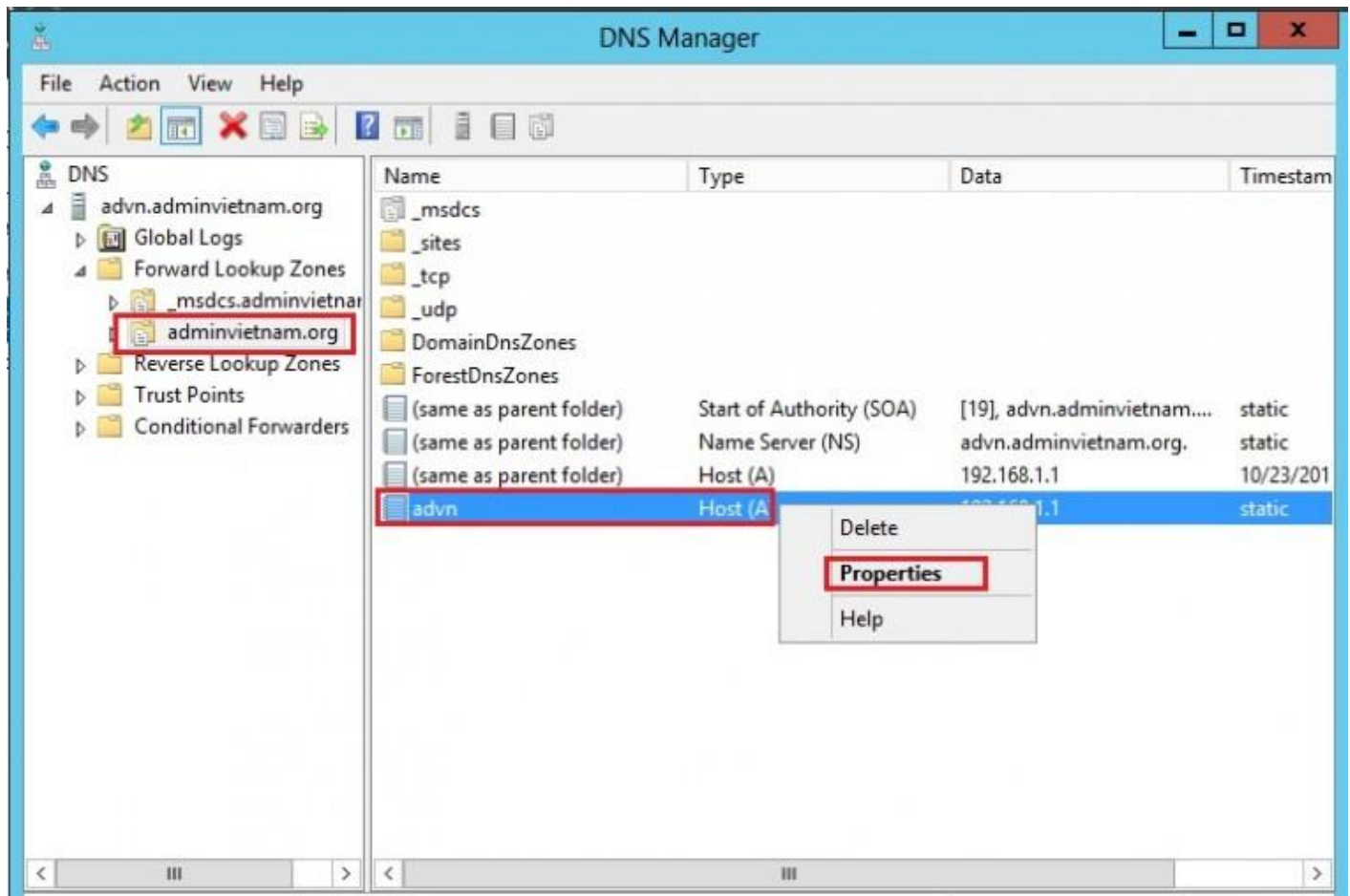
The screenshot shows the 'New Zone Wizard' window with the title bar 'New Zone Wizard'. The main heading is 'Reverse Lookup Zone Name' with a subtext: 'A reverse lookup zone translates IP addresses into DNS names.' Below this, a text box says 'To identify the reverse lookup zone, type the network ID or the name of the zone.' There are two radio button options. The first, 'Network ID:', is selected and highlighted with a red box. Its text box contains '192.168.1'. Below it, explanatory text states: 'The network ID is the portion of the IP addresses that belongs to this zone. Enter the network ID in its normal (not reversed) order. If you use a zero in the network ID, it will appear in the zone name. For example, network ID 10 would create zone 10.in-addr.arpa, and network ID 10.0 would create zone 0.10.in-addr.arpa.' The second option, 'Reverse lookup zone name:', is unselected, and its text box contains '1.168.192.in-addr.arpa'. At the bottom, there are three buttons: '< Back', 'Next >' (highlighted with a red box), and 'Cancel'.

Chọn **Allow only secure dynamic update** và click Next.

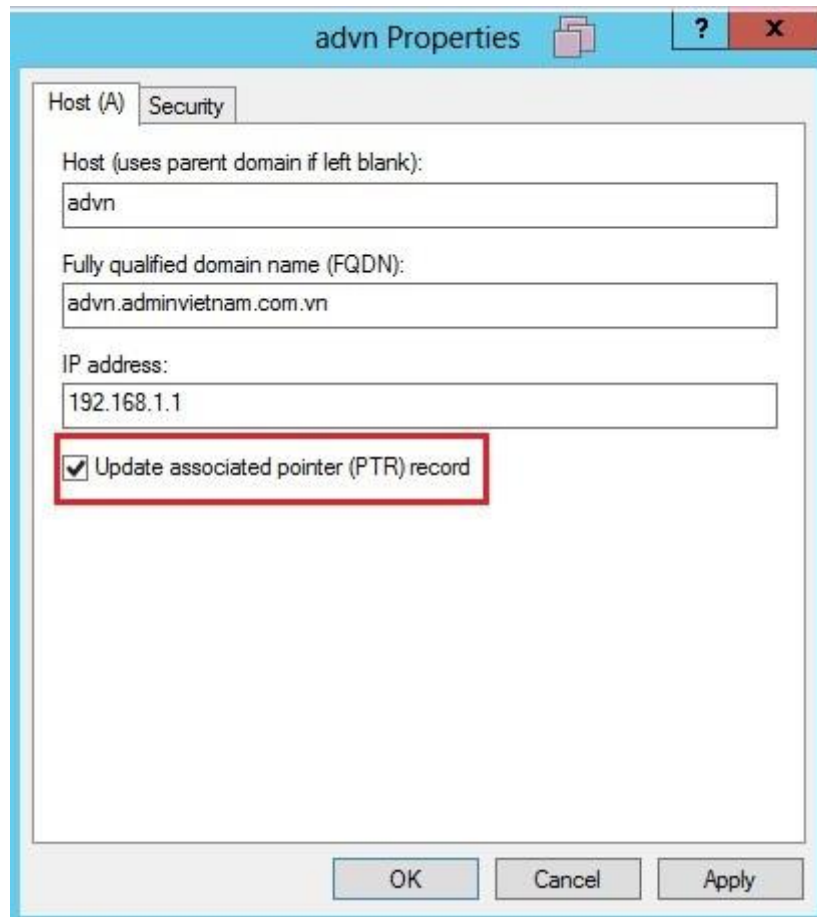
The screenshot shows the 'New Zone Wizard' window with the title bar 'New Zone Wizard'. The main heading is 'Dynamic Update' with a subtext: 'You can specify that this DNS zone accepts secure, nonsecure, or no dynamic updates.' Below this, a text box says 'Dynamic updates enable DNS client computers to register and dynamically update their resource records with a DNS server whenever changes occur. Select the type of dynamic updates you want to allow:'. There are three radio button options. The first, 'Allow only secure dynamic updates (recommended for Active Directory)', is selected and highlighted with a red box. Below it, text says: 'This option is available only for Active Directory-integrated zones.' The second option, 'Allow both nonsecure and secure dynamic updates', is unselected. Below it, text says: 'Dynamic updates of resource records are accepted from any client.' A yellow warning triangle icon is shown, followed by text: 'This option is a significant security vulnerability because updates can be accepted from untrusted sources.' The third option, 'Do not allow dynamic updates', is unselected. Below it, text says: 'Dynamic updates of resource records are not accepted by this zone. You must update these records manually.' At the bottom, there are three buttons: '< Back', 'Next >' (highlighted with a red box), and 'Cancel'.

Click Finish

Sau khi cài đặt hoàn tất quay lại DNS Manager, tại mục **Forward Lookup Zones** => chọn vào tên domain => tên máy => **properties**.



Chọn **update associated pointer (PTR) record** => apply => ok



advn Properties

Host (A) Security

Host (uses parent domain if left blank):
advn

Fully qualified domain name (FQDN):
advn.adminvietnam.com.vn

IP address:
192.168.1.1

☒ Update associated pointer (PTR) record

OK Cancel Apply

Tạo user & join client

Vào server manager => AD DS và click phải chọn **Active Directory user and computer**.

Server Manager

Server Manager • AD DS

Dashboard
Local Server
All Servers
AD DS
DNS
File and Storage Services

SERVERS
All servers | 1 total

Server Name	IPv4 Address	Manageability	Last Update	Windows Activation
ADVN	192.168.1.1	Online - Performance counters not started	10/20/2015 5:32:41 PM	Not activated

EVENTS
All events | 8 total

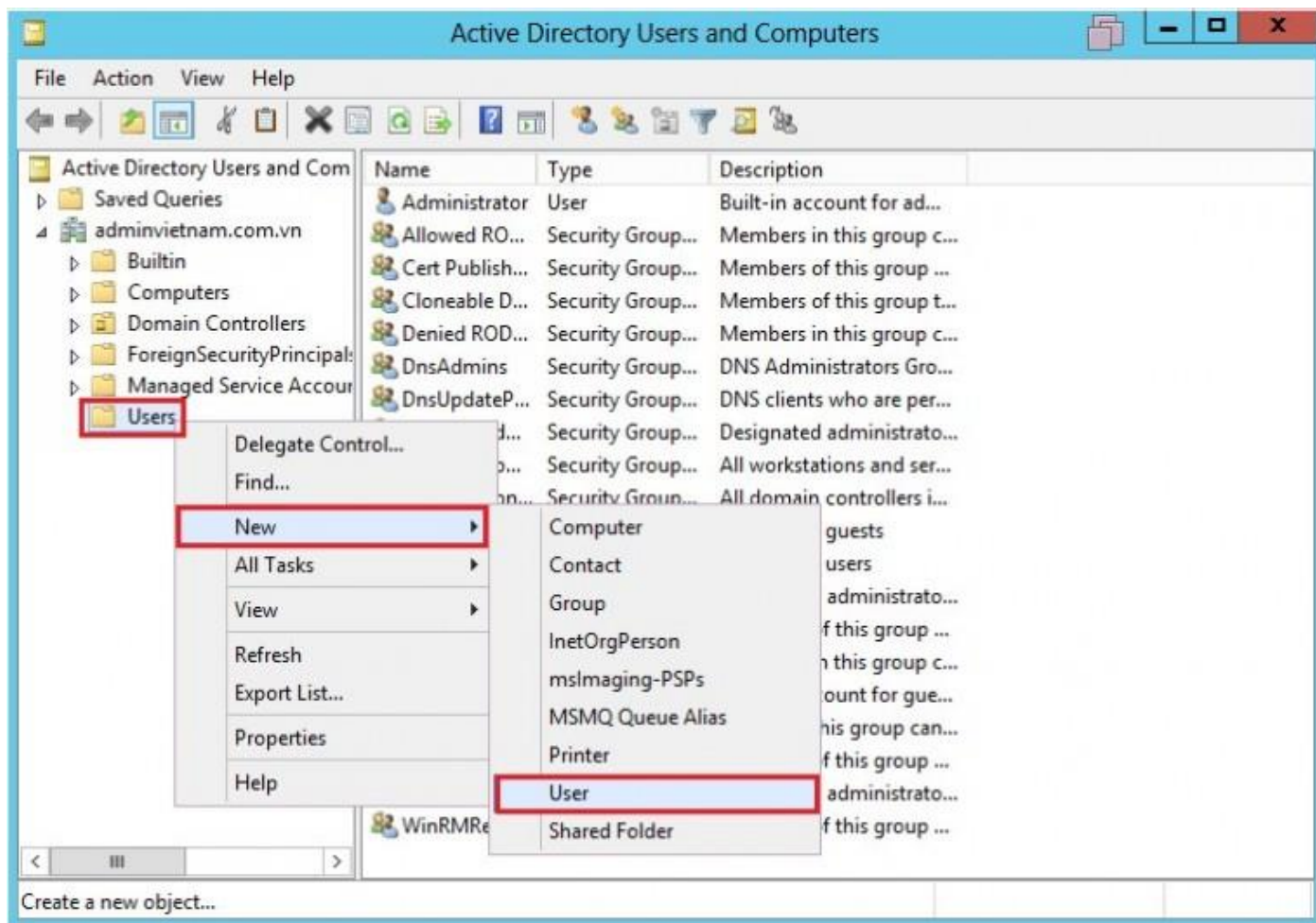
Server Name	ID	Severity	Source	Log
ADVN	1400	Warning	ADWS	Active Directory Web Services
ADVN	6016	Warning	DFSR	DFS Replication
ADVN	1844	Warning	Microsoft-Windows-ActiveDirectory_DomainService	Directory Service
ADVN	4013	Warning	Microsoft-Windows-DNS-Server-Service	DNS Server
ADVN	2886	Warning	Microsoft-Windows-ActiveDirectory_DomainService	Directory Service
ADVN	1202	Error	DFSR	DFS Replication
ADVN	414	Warning	Microsoft-Windows-DNS-Server-Service	DNS Server

Tasks:

- Add Roles and Features
- Shut Down Local Server
- Computer Management
- Remote Desktop Connection
- Windows PowerShell
- Configure NIC Teaming
- Configure Windows Automatic feedback
- Active Directory Administrative Center
- Active Directory Domains and Trusts
- Active Directory Module for Windows PowerShell
- Active Directory Sites and Services
- Active Directory Users and Computers**
- ADSI Edit
- Dcdiag.exe
- Dsads.exe
- Dsdbutil.exe
- Dsmgmt.exe
- Gpfixup.exe
- Ldp.exe
- Netdom.exe
- Nltest.exe
- Ntdsutil.exe
- Rapidmin.exe
- W32tm.exe
- Manage As...
- Start Performance Counters
- Refresh
- Copy

1366 x 768px

Click phải vào user => new => user



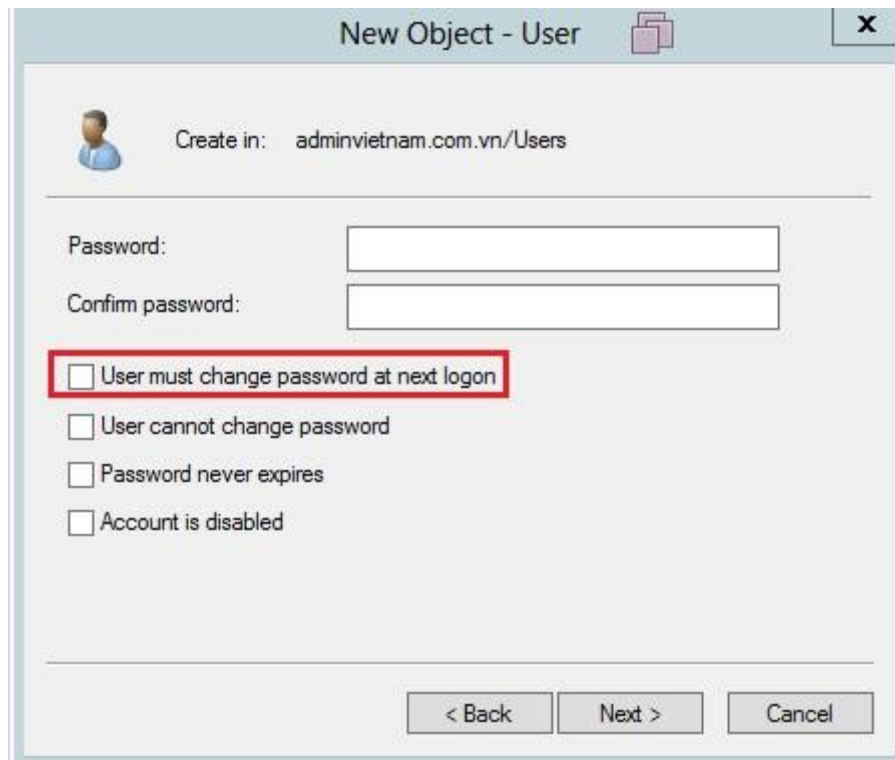
tạo user u1, pass: Abc123456

The 'New Object - User' dialog box is shown. It contains the following fields and options:

- Create in: adminvietnam.com.vn/Users
- First name: u1
- Initials: (empty)
- Last name: (empty)
- Full name: u1
- User logon name: u1
- User logon name (pre-Windows 2000): ADMINVIETNAM\
- Domain: @adminvietnam.com.vn

Buttons at the bottom: < Back, Next >, Cancel

Bỏ chọn tại ô **user must change**.....



New Object - User

Create in: adminvietnam.com.vn/Users

Password:

Confirm password:

☐ User must change password at next logon

☐ User cannot change password

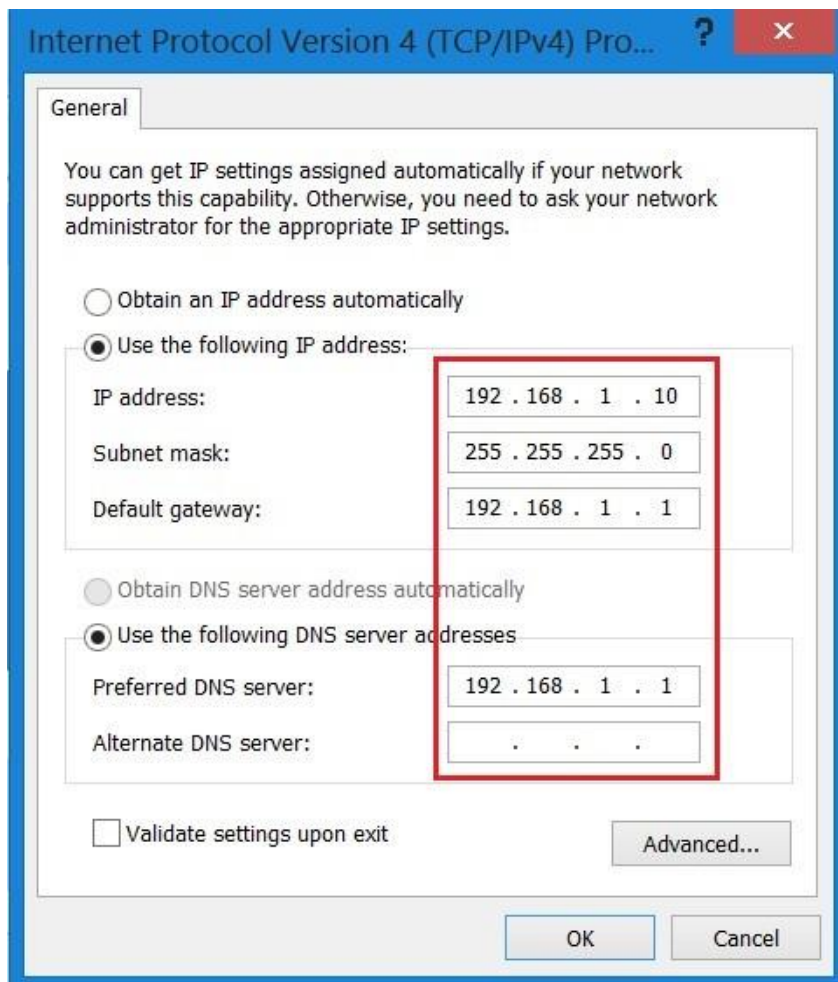
☐ Password never expires

☐ Account is disabled

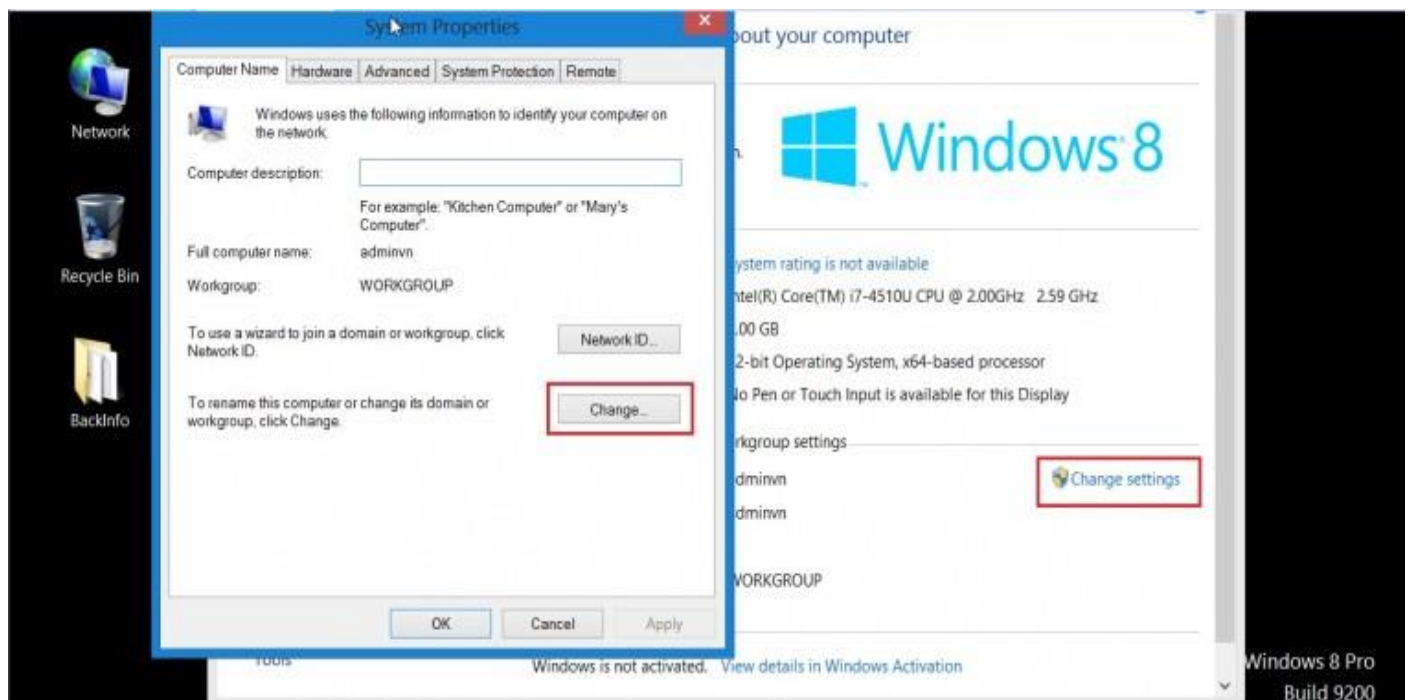
< Back Next > Cancel

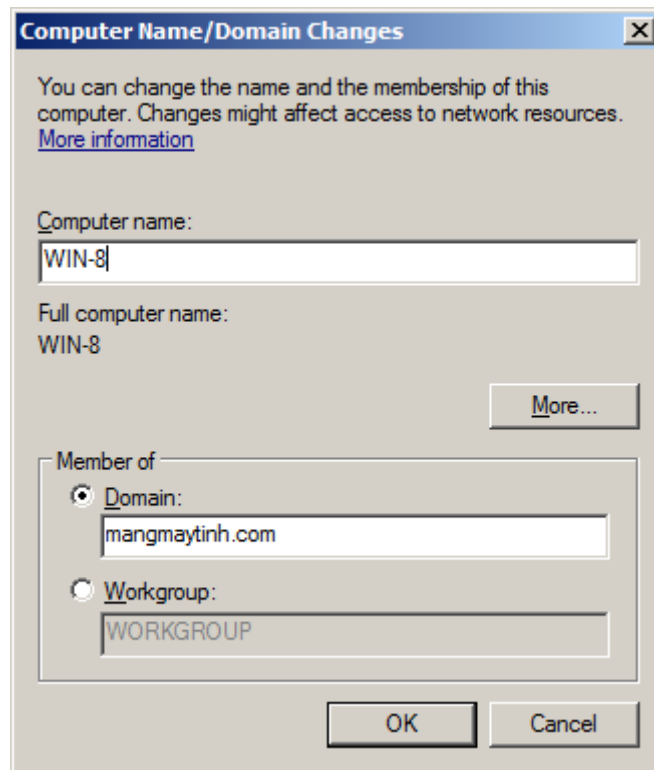
Join Domain

Trên máy windows 8 thực hiện đổi tên máy và đặt ip

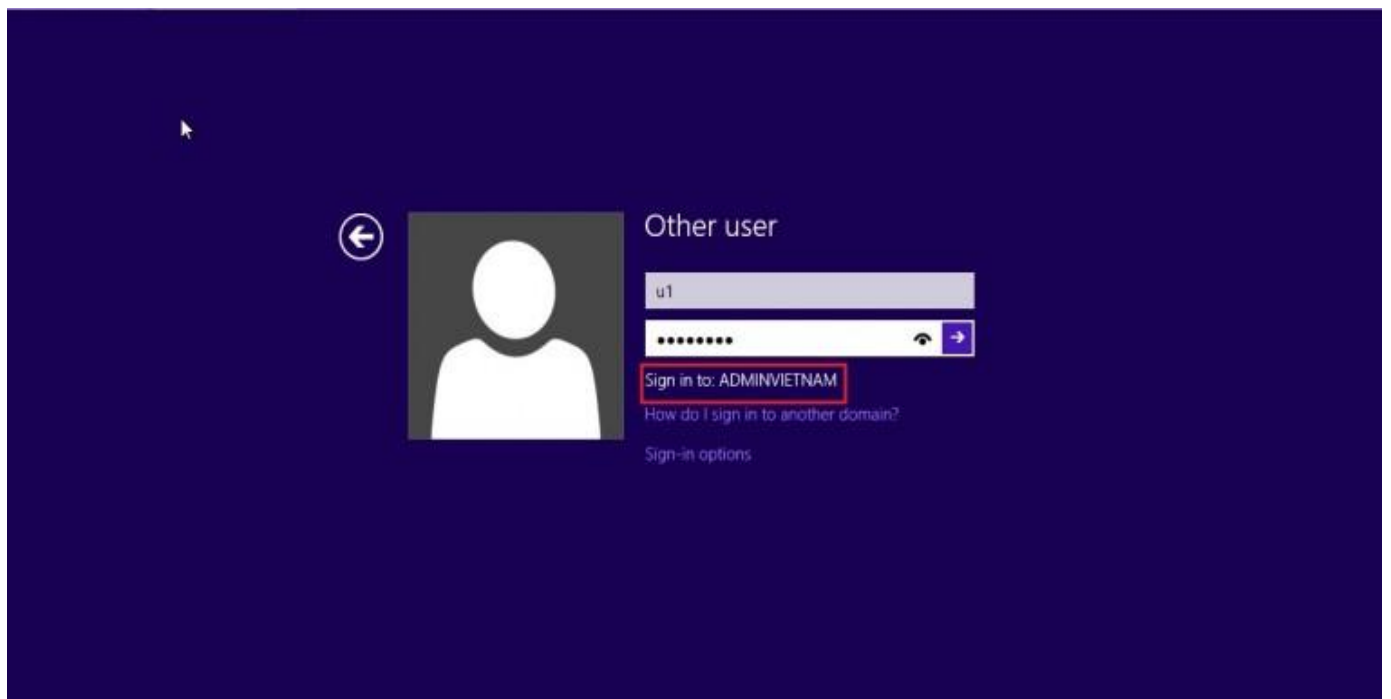


Tiến hành join domain: **mangmaytinhh.com**

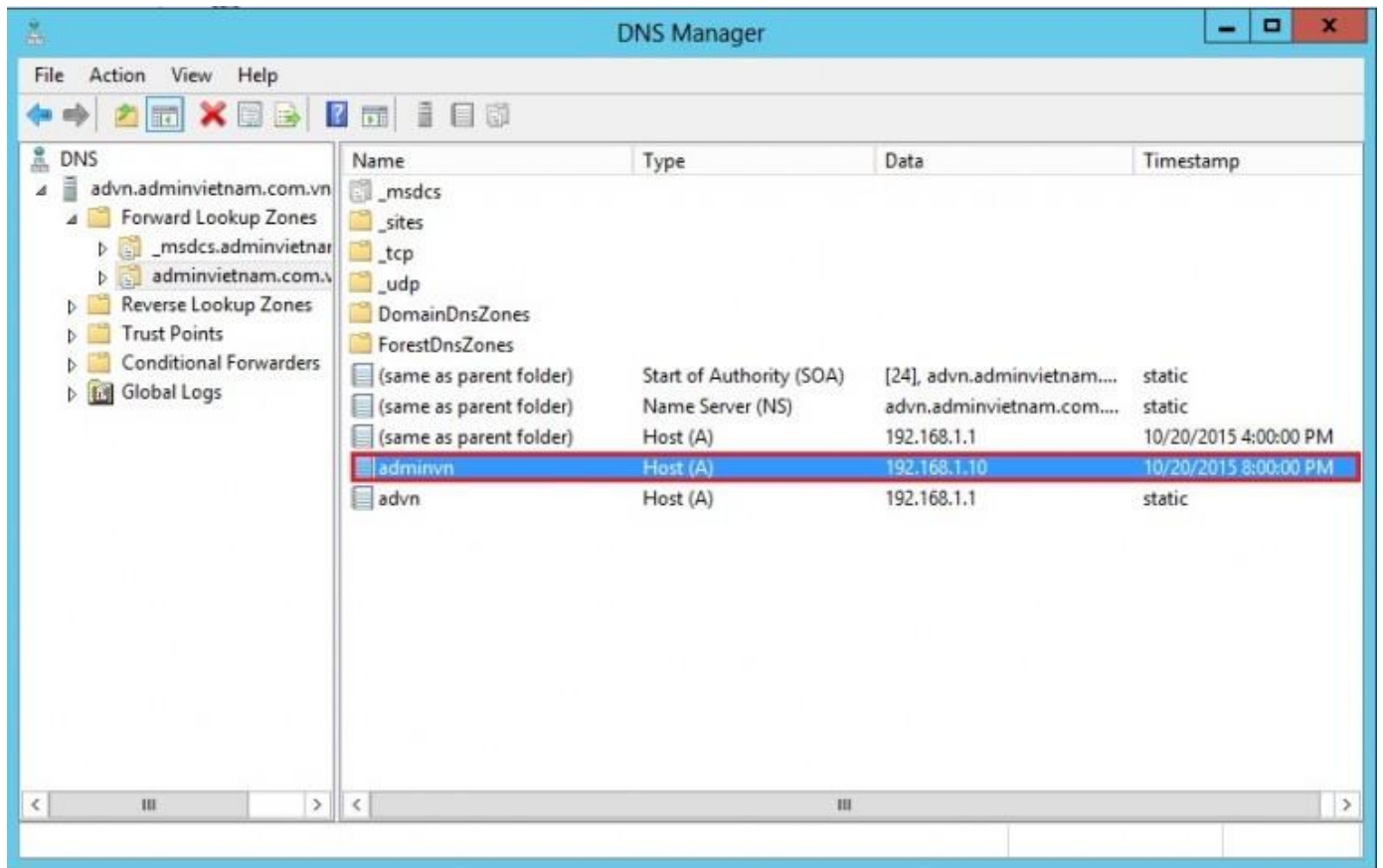




nhập tài khoản Administrator và password của server và click OK => sau khi join thành công máy sẽ khởi động lại, vào đăng nhập chọn other user.



Mở DNS Manager và kiểm tra thấy máy windows 8 đã gia nhập vào domain



Như vậy đã cấu hình xong Domain Controller, DNS server và join được máy client và Domain.